REMARKS

Present Status of the Application

Claims 3-5, 9-12, 17-18 and 20-24 were objected to for improper dependency. Claims 1-25 were rejected under 35 U.S.C. 112, first paragraph, for the specification only supports the scope of the examples in the full scope of the claims. Under 35 U.S.C. 102(b), claims 1-8 and 13-22 were rejected as being anticipated by Leavitt (US 3,340,233), claims 1-24 were rejected as being anticipated by Yabonskii et al. (CAPLUS 1985: 15555), claims 1-24 were rejected as being anticipated by Saupe et al. (US 5,368,770), and claims 1-12 and 23-24 were rejected as being anticipated by or Hikmet et al. (US 5,798,057).

In response, Applicants have amended claims 1, 7, 9-11, 13 and 20-23 and submitted the following remarks. Reconsideration of claims 1-25 is respectfully requested.

Objection to Claims 3-5, 9-12, 17-18 & 20-24

Please note that Applicants have amended claims 9-11 and 20-23 to make each of claims 3-5, 9-12, 17-18 and 20-24 satisfy 37 CFR 1.75(c).

Rejections to Claims 1-25 under 35 U.S.C. 112

The Office Action rejected claims 1-25 under 35 U.S.C. 112, first paragraph, for the specification only supports the scope of the examples in the full scope of the claims. Applicants respectfully disagree with it for the reasons set forth.

First, it is generally known in the art that liquid crystallinity is caused with hetero-rings or fused rings incorporated in the backbone of a liquid-crystal compound. Second, all of the ring-containing backbones described in the claims of this invention have been disclosed in the liquid-crystalline compound database "LiqCryst®" that is sold by Fujitsu Kyushu Engineering, ***as described in page 36, line 28-page 37, line 3 of the specification***. The database is well known to one of ordinary skill in the art. Meanwhile, by referring to the references listed in the database "LiqCryst®", one of ordinary skill in the art has no difficulty in the syntheses of all compounds in this invention.

Moreover, the books listed in lines 4-8 of page 28 of the specification that concern organic syntheses, i.e., *Methoden der Organischen Chemie, Organic Reactions, Organic Syntheses, Comprehensive Organic Synthesis* and *Lecture of New Experimental Chemistry*, can also be referred to. Particularly, *Methoden der Organischen Chemie* by Houben Wyle describes the synthesizing methods of the ring structures in details.

Rejections to Claims 1-8 and 13-22 under 35 U.S.C. 102(b) with Leavitt

Claims 1-8 and 13-22 were rejected under 35 U.S.C. 102(b) as being anticipated by Leavitt. Please note that Applicants have amended claims 1, 7, 13 and 20-22 among them.

The monomer disclosed in Leavitt (claim 1) is CH_2=CRC(O)Ar–ArC(O)CR=CH_2 or CH_2=CRC(O)Ar–Z–ArC(O)CR=CH_2, which corresponds to a monomer (1) of claim 1 ***with two rings*** and with R^1 derived from an ethyl group by substituting the terminal –CH_2– of the ethyl with –CH=CH– and ***substituting the other –CH_2– of the ethyl with –CO–***. Accordingly, Applicants have restricted independent claims 1 and 13 that *when m+n+q=1 making* ***a ring number of two,*** *any –CH_2– of the alkyl represented by R^1* ***is not substituted*** *with –CO–*; and also restricted independent claim 7 that *in formula (a)* ***with two rings,*** *any –CH_2– of the alkyl represented by R^1* ***is not substituted*** *with –CO–*. Thus, the scope of the monomers or polymers of independent claim 1, 7 or 13 does not overlap with that of Leavitt.

For at least the above reasons, Applicants respectfully submit that independent claims 1, 7 & 13 and claims 2-6, 8 & 14-22 dependent thereon all patently define over the prior art.

Rejections to Claims 1-24 under 35 U.S.C. 102(b) with Yabonskii et al.

Claims 1-24 were rejected under 35 U.S.C. 102(b) as being anticipated by Yabonskii et al. Please note that Applicants have amended claims 1, 7, 9-11, 13 and 20-23.

The monomer disclosed in Yabonskii et al. corresponds to a monomer (1) of claim 1 ***with two rings*** and with R^1 being –CN and Z^4 being ***α,ω-alkylene of 5 carbon atoms***. Accordingly,

Applicants have restricted independent claims 1 and 13 that *when m+n+q=1 making a ring number of two, Z^4 is a single bond*, and restricted independent claim 7 that *in formula (a) with two rings, Z^4 is a single bond.* Thus, the scope of independent claim 1, 7 or 13 does not cover the monomer or polymer of Yabonskii et al.

For at least the above reasons, Applicants respectfully submit that claims 1, 7 and 13 and claims 2-6, 8-12 and 14-24 dependent therefrom all patently define over the prior art.

Rejections to Claims 1-24 under 35 U.S.C. 102(b) with Saupe et al.

Claims 1-24 were further rejected under 35 U.S.C. 102(b) as being anticipated by Saupe et al. Please note that Applicants have amended claims 1, 7, 9-11, 13 and 20-23.

As indicated by Examiner, the corresponding monomer used in Saupe et al. is BAB (4,4'-bisacryloylbiphenyl, CH_2=CHC(O)Ph-PhC(O)CH=CH_2), ***which is within the scope of CH_2=CRC(O)Ar-ArC(O)CR=CH_2 disclosed in Leavitt.*** Since independent claims 1, 7 and 13 have been amended not overlapping with Leavitt, as mentioned above, their scopes surely do not cover the monomer "BAB" used in Saupe et al.

Moreover, Saupe et al. relates to a thin electrically addressable light modulating film. ***Differently***, this invention concerns polymers usable for optically-anisotropic materials and for LCD devices, optically-anisotropic materials and LCD devices.

For at least the above reasons, Applicants respectfully submit that claims 1, 7 and 13 and claims 2-6, 8-12 and 14-24 dependent therefrom all patently define over the prior art.

Rejections to Claims 1-12 and 23-24 under 35 U.S.C. 102(b) with Hikmet et al.

Claims 1-12 and 23-24 were rejected under 35 U.S.C. 102(b) as being anticipated by Hikmet et al. Please note that Applicants have amended claims 1, 7, 9-11 and 23.

In Hikmet et al., the monomer having formula (1) of this invention as indicated by Examiner is cyano-stilbene expressed by formula (2) in FIG. 7, which corresponds to a monomer (1) of claim 1 with m+n+q=1 (***two rings***), one of Z^1, Z^2 & Z^3 being –CH=CH– and the others being a single bond, R^1 being –CN and Z^4 being derived from ***α,ω-alkylene of 7 C-atoms*** by substituting the ring-connecting $–CH_2–$ of the α,ω-alkylene with –O–. Accordingly, Applicants have restricted independent claims 1 and 13 that *when m+n+q=1 making* ***a ring number of two, Z^4 is a single bond,*** and also restricted independent claim 7 that *in formula (a)* ***with two rings, Z^4 is a single bond.*** Thus, the scope of the monomers or polymers of independent claim 1, 7 or 13 does not cover the cyano-stilbene monomer and its polymer in Hikmet et al.

Moreover, Hikmet et al. relates to switchable cholesteric filters only, which are not related to the aforementioned objects of this invention at all.

For at least the above reasons, Applicants respectfully submit that claims 1, 7 & 13 and claims 2-6, 8-12 & 23-24 dependent therefrom all patently define over the prior art.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-25 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
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